

Abstract

Copper(I) formate complexes of the formula  $L_n\text{Cu}(\text{HCOO}) \cdot x \text{HCOOH}$ , where x is from 0 to 10, n is 1, 2, 3 or 4 and the n ligands L, independently of one another, are each one of the following ligands:

- a phosphane of the formula  $\text{R}^1\text{R}^2\text{R}^3\text{P}$ ;
- a phosphite of the formula  $(\text{R}^1\text{O})(\text{R}^2\text{O})(\text{R}^3\text{O})\text{P}$ ;
- an isocyanide of the formula  $\text{R}^1\text{-NC}$ ;
- an alkene of the formula  $\text{R}^1\text{R}^2\text{C}=\text{CR}^3\text{R}^4$ ; or
- an alkyne of the formula  $\text{R}^1\text{C}\equiv\text{CR}^2$ ;

where  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$ , independently of one another, are hydrogen, a linear or branched, optionally partly or completely fluorinated alkyl, aminoalkyl, alkoxyalkyl, hydroxyalkyl, phosphinoalkyl or aryl radical of one to 20 carbon atoms;

with the exception of triphenylphosphinocopper(I) formate and 1,1,1-tris(diphenylphosphinomethyl)ethanecopper(I) formate;

are decomposed for depositing metallic copper.